

### Spotlight On: Communication

Mathematicians construct viable arguments and critique the reasoning of others. The ability to communicate mathematical ideas is vital for students to grow as mathematicians themselves. Moreover, clear and open communication is necessary for success in any collaborative working environment. Your student's teacher will help students develop communication skills by using structures such as the *Dyad*, where each student has a set amount of time to explain their thinking. In this way, students learn to listen and ask thoughtful questions to help in their team communication.

### The Big Picture

#### Growing From

Numerical expressions

#### Working On

Exponents;  
Order of Operations;  
Multiples and factors;  
Distributive Property

#### Growing To

Algebraic expressions;  
Distributive Property

### Need Help?

Methods & Meanings boxes are included in the Mathematician's Notebook as reference.

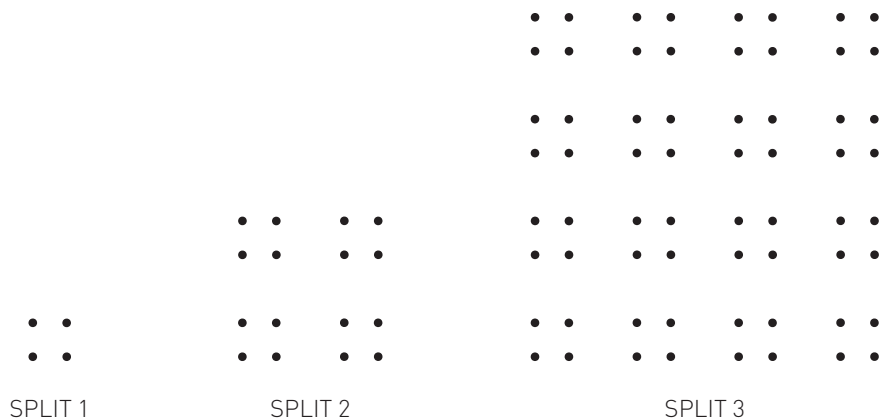
- 6.1.1: Multiplying Mixed Numbers
- 6.1.2: The Vocabulary of Algebraic Expressions
- 6.2.1: Order of Operations
- 6.2.2: Least Common Multiple
- 6.2.3: Conjecture and Justify
- 6.2.6: Greatest Common Factor
- 6.2.7: Distributive Property

### Current Topics

The vocabulary introduced in this chapter is an important part of mathematical communication for students as they work together to write expressions with numbers in this chapter and with variables in future chapters. The Giant One and unit rates introduced in Chapter 4 reappear in this chapter as students work with factors and multiples. Students will use the pattern skills they discussed in Chapter 1 to look for and make conjectures about patterns in multiples. The number fluency they are developing as they work with all forms of numbers in this chapter will help them as they move toward writing and evaluating algebraic expressions in Chapters 8 and 9.

#### Rules of Operations (Section 6.1)

A primary focus of this section is numerical expressions. A numerical expression conveys an idea through numbers and mathematical operations. For example, students will work with exponents visually as shown.



4 represents the number of dots in the first image.

$4 \times 4$  or  $4^2$  represents the number of dots in the second image.

$4 \times 4 \times 4$  or  $4^3$  represents the number of dots in the third image.

#### Multiples and Factors (Section 6.2)

In this section, students will explore a classic dilemma: why is the number of hot dogs in a package different from the number of hot dog rolls in a package? To solve this problem, they will develop methods to determine the least common multiple. Later in the section, they learn to determine the greatest common factor of two or more numbers, and they apply this knowledge as they use the Distributive Property.

### Try This at Home!

In this course, students are often encouraged to discuss strategies for doing mental math. Ask your student to explain to you how they might add numbers such as 112 and 234 in their head, and share your own strategies as well. Talking with you about math will help your student strengthen their communication skills.

